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Heinz Zoch

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EXAMINER .

CHEUNG, WILLIAM K

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/627,501
Filing Date: July 25, 2003
Appellant(s): ZOCH ET AL.

Robert G. Weilacher
(Registration No. 20531)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 10, 2007 appealing from the Office action mailed October 13, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1, 3-10, 12, 14, 15, 17-25 are rejected under 35 U.S.C. 103(a) as obvious over Nagasawa (US 5,609,671).

*The invention of claims 1, 3-10, 20-25 relates to an **aqueous, colloidal, freeze-resistant and storage-stable gas black suspension, comprising 2-30 wt.% gas black having a DBP number of 40-200 ml/100g, 0-40 wt.% carbon black, a dispersion-supporting additive, a biocide and water, and having a zeta potential of***

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less than -10 mV, a surface tension of greater than 50 mN/m and an average particle size of less than 200 nm wherein the dispersion-supporting additive is a neutralized styrene-acrylic acid copolymer with an average molecular weight of 1000-20,000, having an acid value of 120-320 and which is present in the amount of 1 to 50 wt.%.

The invention of claims 12, 14 relates to an aqueous, colloidal, freeze-resistant and storage-stable gas black suspension, consisting essentially of 2-30 wt.% gas black having a DBP number of 40-200 ml/100g, 0-40 wt.% carbon black, a dispersion-supporting additive, a biocide and water, and having a zeta potential of less than -10 mV, a surface tension of greater than 50 mN/m and an average particle size of less than 200 nm wherein the dispersion-supporting additive is neutralized styrene-acrylic acid copolymer with an average molecular weight of 1000-20,000, having an acid value of 120-320 and which is present in the amount of 1 to 50 wt.%.

The invention of claims 15, 17 relates to an aqueous, colloidal, freeze-resistant and storage-stable gas black suspension, consisting of 2-30 wt.% gas black, having a DBP number of 40-200 ml/100g, 0-40 wt.% carbon black, a dispersion-supporting additive, a biocide and water, and having a zeta potential of less than -10 mV, a surface tension of greater than 50 mN/m and an average particle size of less than 200 nm wherein the dispersion-supporting additive is

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neutralized styrene-acrylic acid copolymer with an average molecular weight of 1000-20,000, having an acid value of 120-320 and which is present in the amount of 1 to 50 wt%.

Nagasawa (col. 1, line 33-37) discloses a carbon black dispersion stabilized in an aqueous medium in the presence of styrene(meth)acrylic resin.

Regarding the claimed "gas black", it is a kind of carbon black produced by a specific process. However, the claimed "gas black" is still a carbon black based on its composition, which is also affirmed by appellants' specification (page 2, line 18-31). Therefore, the recited "gas black" is merely functional language that does not lend itself to patentability.

Regarding the claimed DBP values being claimed, the carbon black teachings in Nagasawa (col. 1, line 33-37) generically includes the gas black and its properties as claimed. Therefore, the examiner has a reasonable basis to believe that it would not be difficult to one of ordinary skill in art to recognize that any carbon black, including the one as claimed, would be suitable for the invention of Nagasawa. Motivated by the expectation of success, it would have been obvious to one of ordinary skill in art to recognize that all carbon blacks would be suitable for obtaining the carbon black dispersion of Nagasawa to obtain the gas black limitation being claimed. In view of the limited number of species of carbon black available in the carbon black industry.

Regarding the claimed neutralized styrene-acrylic acid copolymer being claimed, the styrene(meth)acrylic resin teachings in Nagasawa (col. 1, line 33-37) generically includes the neutralized styrene-acrylic acid copolymer as claimed. Therefore, the examiner has a reasonable basis to believe that it would not be difficult to one of ordinary skill in art to recognize that any styrene(meth)acrylic resin, including the one as claimed, would be suitable for the invention of Nagasawa. Motivated by the expectation of success, it would have been obvious to one of ordinary skill in art to recognize that all styrene(meth)acrylic resin would be suitable for obtaining the carbon black dispersion of Nagasawa to obtain the neutralized styrene-acrylic acid copolymer limitation being claimed.

In order to overcome the rejection set forth, appellants must submit comparative data to show the criticality of employing the specific type of carbon black and the neutralized styrene-acrylic acid copolymer of instantly claimed invention.

(10) Response to Argument

Appellant's arguments filed May 10, 2007 have been fully considered but they are not persuasive. Appellants argue that the present invention relates to a particular kind of carbon black known in the industry as "gas black", and that the carbon black disclosed in Nagasawa is a conventional carbon black. However, appellants fail to

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recognize that Nagasawa is silent that the disclosed carbon black is a conventional black. Further, appellants recognize that “gas blacks”, “lamp blacks”, and “gas blacks” are species of the “carbon black” genus. When Nagasawa (col. 1, line 33-37) discloses a carbon black dispersion stabilized in an aqueous medium in the presence of styrene(meth)acrylic resin, the “carbon black” of Nagasawa generically includes the “gas black” as claimed. In view of limited number of species of different kind of carbon blacks, it would not be difficult for one of ordinary skill in art to employ a “gas black” which is still a form of “carbon black” in the disclosed composition of Nagasawa. Therefore, the 103 rejection set forth is proper.

The examiner has fully considered the affidavit filed May 10, 2007 (originally filed August 18, 2006). Although appellants have shown the differences between “a conventional carbon black” and “a gas black”, the affidavit is not effective in overcoming the 103 rejection set forth because Nagasawa is silent that the disclosed “carbon black” is “a convention carbon black”. Further, although appellants have shown some differences in certain properties between “a conventional carbon black” and “a gas black”, none of the properties as disclosed in the affidavit is related to the properties as claimed. Therefore, the argued criticality and comparative data as presented do not commensurate to the scope of the claimed invention. Regarding the argued non-entry of the Declaration filed January 30, 2007, the entry of the Declaration was denied, adequately for the reasons set forth by the advisory action of February 15, 2007.

In view of the reasons set forth above, the 103 rejection set forth is maintained.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.



Respectfully submitted,

William K. Cheung, Ph. D.

Primary Examiner

Conferees:



David Wu



Romulo Delmendo